photomicrographs from a sectioned and stained specimen. The original slides were scanned at full 2700 DPI resolution on a Nikon Coolscan and opened as separate Photoshop 3.0 documents on a Macintosh Centris 650 with 40MB RAM and a 1 gig hard drive partitioned to allow 500MB free space for the application. The brain photograph was opened first and used as the main background image to build upon. The photomicrographs were opened and enhanced by increasing color saturation and contrast. Physical artifacts such as dust and ragged tissue edges were retouched and smoothed out with erasing and cloning tools. Each photomicrograph was rotated and skewed to match the angle of the brain photograph, sized to fit the apparent change in perspective, then copied and pasted into separate layers in the main document.

At this point, the background was changed to pure black and the brain image was placed in a higher layer. A visual wedge was removed from the right side of the image by drawing a path along the midline of the brain and filling it with a translucent level of white. Each photomicrograph was halved along the central axis. The left half in each case was placed in a layer behind the brain, while each of the right halves were brought to the front layers. The opacities of both the brain and wedge layers were adjusted to allow the viewer to see the labeled cells through the outer tissue, indicating that they were spread throughout the brain, not just on one side.

When images get this complex, the "layers" feature in Photoshop 3.0 is essential. There were nine active layers in this document and the relationship between them changed many times during production. This shifting allowed experimentation which would not have been possible with a more rigid, single layer, such as that found in Photoshop 2.5. Once the final look was decided on, the image was "flattened" to one layer to expedite output. The main document was sized to a 4K output on a 4x5 transparency, while a second version was saved at 200 DPI for output to a Kodak XL7720 dye sublimation printer.

Author's Note: The BPA Board of Registry has recently expanded its requirements and elective selections to include several assignment possibilities in digital imaging. Candidates are encouraged to explore the use of the computer in producing images such as this, and submitting them in the Practical Examination process. This type of work is being requested more frequently in the working environment and the Board is committed to keeping up with real world assignments.

James E. Hayden, RBP, is currently serving as Chairman of the Board of Registry for the BPA. He has recently resigned his position at the University of Pennsylvania to devote full time to his own business, Bio-Graphics. This image received an Award of Excellence in the Digital Imaging category of Bio-IMAGES in San Antonio, Texas.

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